

PRASHANT PRASAD KANTH

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EDUCATION

MS, Computer Science Rutgers University-New Brunswick (CGPA: 4.0)	Sep 2021 - May 2023
BE, Computer Science and Engineering Bangalore Institute of Technology (Percent: 77)	Aug 2013 - Jun 2017
Relevant Courses: DBMS, Data Structures and Algorithms, Statistics, Machine Learning, Computer Vision	

PROFESSIONAL EXPERIENCE

Artrendex New Jersey, US	Jun 2022 – Sep 2022
<i>Machine Learning Research Intern (stack: Python, PyTorch, OpenCV, Tensorboard, Numpy, Pandas, skimage)</i>	
<ul style="list-style-type: none">Improved reusability of data pipeline by generalising pre-processing and overriding PyTorch's Dataset class to reduce manual labor by 10%.Applied transfer learning technique on deep learning models like VGG, achieving 94% test accuracy in art classification.Researched on positional encoding options and explored 3D CNN variation of Resnet, 'R3D-18', for art classification.	
Oracle Bangalore, India	Jul 2017 - Jun 2021
<i>Cloud Consultant (stack: Oracle SQL, Relational Databases, Java, Python, sklearn, Gensim, NLTK, Oracle BI, MS Excel, XML)</i>	
<ul style="list-style-type: none">Managed end-to-end integration and report development, mitigating risk to ensure successful delivery.Built an error analysis tool by utilising a meta-classifier with SVM, GaussianNB and MultinomialNB achieving 92% accuracy on error classification, reducing manual error analysis by 75% during data migration.Developed over 50 SQL reports analysing data from multiple tables, providing insights into critical business functions.Remodelled Java automation program by integrating with REST APIs, reducing manual data migration effort by 20%.Conducted training sessions to equip over 40 new hires with the skills and knowledge to drive organizational success.	

PROJECTS

Patient Monitoring using Activity Recognition (stack: PyTorch, Keras, OpenCV, Mediapipe, Unity3D)	Oct 2022 - Nov 2022
<ul style="list-style-type: none">Trained CNN-LSTM and LSTM models to monitor patient's daily activities and generate activity distribution report.Created synthetic data, 50000 frames, for 6 different activities using Unity3D and leveraged mediapipe framework to extract 33 body keypoints for each frame as initial features.Experimented with pose-normalized distances between 18 pairs of selected keypoints as additional features to achieve 82.4% test classification accuracy on real-world activity videos.	
Querying on Streaming Data (stack: Python, Apache Spark, boto3, matplotlib)	Sep 2022 - Oct 2022
<ul style="list-style-type: none">Reduced 30% pre-processing time on approx. 130GB (40M records) of data using MapReduce and saved significant storage space by writing data into parquet format.Designed a pipeline using Apache Spark in python to consume streaming data and provide real-time visualization on top scholarly works using matplotlib animation.	
Text-Conditional Image Generation (stack: Python, PyTorch, Hugging Face, OpenCV, NumPy)	Mar 2022 - May 2022
<ul style="list-style-type: none">Implemented a Deep Convolutional GAN in multi-GPU setting to generate 256x256 images from textual descriptions.Employed 3 text encoders (DistilBERT, CLIP and char-CNN-RNN) to obtain text embeddings and compared their results.Improved model training by using 3 different methods: Label Smoothing, Label Noise and Wasserstein-Gradient Penalty.	
Smart Health Prediction using Naive Bayes Classifier (stack: Java, JDBC, HTML, CSS, JavaScript)	Feb 2017 - Jun 2017
<ul style="list-style-type: none">Integrated backend and middleware to enable user classification into 3 disease categories using Naive Bayes.Supported in web development for data entry of new users and displaying collected statistics charts.	

TECHNICAL SKILLS

Languages: Python, SQL, Java, MATLAB, C++, HTML, JavaScript | **IDEs:** VS Code, Jupyter Notebook, Spyder | **OS:** MacOS, Linux
Frameworks and Tools: PyTorch, sklearn, OpenCV, HuggingFace, NumPy, Pandas, NLTK, Gensim, PySpark, Mediapipe, Git

CERTIFICATIONS

NoSQL, Big Data, and Spark Foundations Specialization – Coursera IBM	Feb 2023
Introduction to Machine Learning on AWS – Coursera AWS	Jan 2023
Machine Learning – Coursera Stanford Online	Jun 2022
Oracle Database SQL Certified Associate	Jul 2020
Oracle Cloud Infrastructure Foundations Certified Associate	Jul 2020

EXTRA-CURRICULAR

Rutgers University New Jersey, US	
<ul style="list-style-type: none">Grader (Computer Vision Course)	Feb 2023 - May 2023
<ul style="list-style-type: none">Teaching Assistant (Discrete Mathematics)	Feb 2022 - May 2022